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Agricultural Memorandum No 509

Estimation of mean monthly sunshine - L P Smith

Given the monthly mean sunshine (hours/day) of Southampton and South Farnborough, an attempt was made to estimate the values for Martyr Worthy, lying between the two and about 30 Km from each.

By taking a simple mean of the two given values, the results are:

Month	Southampton	S Farnborough	Mean	Martyr Worthy	Error
1971 Jan	1.53	1.28	1.40	1.25	+0.15
Feb	2.69	2.84	2.77	2.51	+0.26
Mar	3.88	3.18	3.53	3.53	0
Apr	5.46	4.25	4.85	4.75	+0.10
May	7.66	7.38	7.52	7.44	+0.08
Jun	5.80	4.30	5.05	5.07	-0.02
Jul	8.70	7.73	8.22	8.27	-0.05
Aug	4.86	4.74	4.80	4.60	+0.20
Sep	6.91	6.02	6.46	6.33	+0.13
Oct	4.95	4.92	4.93	4.47	+0.46
Nov	3.37	3.46	3.42	3.27	+0.15
Dec	1.09	1.11	1.10	1.22	-0.12

A mean error of 0.14 hours/day

If it is assumed that the Martyr Worthy average is the mean of the other two, then the estimates based on observed percentage of average at each station separately are:

Martyr Worthy Sunshine 1971

	Assumed Average	Actual	Ref Southampton	Error	Ref S Farnboro	Error
Jan	1.72	1.25	1.44	+0.19	1.36	+0.11
Feb	2.53	2.51	2.56	+0.05	2.93	+0.42
Mar	3.88	3.53	3.73	+0.20	3.23	-0.30
Apr	5.57	4.75	5.30	+0.55	4.40	-0.35
May	6.56	7.44	7.46	+0.02	7.53	+0.09
Jun	7.09	5.07	5.68	+0.61	4.39	-0.68
Jul	6.44	8.27	8.56	+0.29	7.85	-0.42
Aug	6.20	4.60	4.71	+0.11	4.90	+0.30
Sep	4.80	6.33	6.70	+0.27	6.20	-0.13
Oct	3.43	4.47	4.74	+0.27	5.15	+0.68
Nov	1.99	3.27	3.13	+0.14	3.60	+0.33
Dec	1.48	1.22	1.01	-0.21	1.21	-0.01
			Mean error	0.24		0.32

Any comments or suggestions on this paper should be referred to the author.

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Bracknell

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